

I CLAIM:

1. A curable electrically conductive carbonaceous cement composition for use in the encasement of a ground electrode, comprising a slurry made of water, a hydraulic cement, a particulate, electrically conductive form of carbon and discontinuous discrete fibers of a material chemically stable in the slurry.
2. A curable carbonaceous cement composition according to claim 1, wherein said hydraulic cement is Portland cement.
3. A curable carbonaceous cement composition according to claim 2, wherein said form of carbon is selected from the group consisting of graphite, coke and coke breeze.
4. A curable carbonaceous cement composition as defined in claim 3, wherein said fibers are of a material selected from the group consisting of cellulose and its derivatives, polyolefins, and acrylics.
5. A method of preparing an electrically conductive carbonaceous cement slurry which is curable into a protective casing for a ground electrode, comprising the steps of:
  - (i) mixing a particulate, electrically conductive form of carbon with a hydraulic cement;
  - (ii) dry blending a selected quantity of fibers of a material chemically stable in the slurry; and
  - (iii) stirring the blend with water to form the carbonaceous cement slurry.
6. A method according to claim 5, wherein said hydraulic cement is Portland cement, said particulate electrically conductive form of carbon is coke breeze in

an amount making up from 45 to 55 % by weight of the total of coke breeze and Portland cement, and wherein said fibers make up from 0.5 to 2.0 weight per cent of the slurry.

7. A method according to claim 5, wherein the material of said fibers is selected from the group consisting of recycled cellulose, fiberglass and polypropylene.
8. A method according to claim 5, wherein prior to slurrying with the carbon, cement and fibers, said water is admixed with a solution of a metal soap selected from the group consisting of alkali metal salts of fatty acids and alkaline earth salts of fatty acids in an amount to bring the soap concentration to between 0.5 to 1.0% by weight in said slurry.
9. A method according to claim 8, wherein said metal soap is a sodium soap of Pamak C4 (trade-mark).
10. An electrically conductive carbonaceous cement composition for use in the encasement of a ground electrode, comprising a slurry of water, a hydraulic cement, a particulate electrically conductive form of carbon and a metal soap selected from the group consisting of alkali metal salts of fatty acids and alkaline earth salts of fatty acids.
11. A composition according to claim 10, wherein said hydraulic cement is Portland cement and said form of carbon is coke breeze.
12. A composition according to claim 11, wherein said coke breeze make up from 45 to 55% by weight of the total weight of coke breeze and Portland cement.

13. A composition according to claim 11, wherein said metal soap is present in an amount of from 0.5 to 1.0% by weight of said slurry.
14. A method for preparing a deep well anode, comprising the steps of:
  - (i) providing a mold;
  - (ii) aligning a ground anode in the mold for receiving a protective sheath of carbonaceous cement;
  - (iii) encasing the anode in the mold with a dry granular carbonaceous cement and tamping the dry mixture about the anode until fully settled and shaped;
  - (iv) slowly adding sufficient water to fully saturate the sheath of carbonaceous cement; and
  - (v) curing the carbonaceous cement to hardness.